

**Amendments to the Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-9. (Canceled)

10. (Currently Amended) A method for producing a single crystal by Czochralski method by pulling a seed crystal from a raw material melt, comprising:

immersing a seed crystal into a raw material melt; and

growing a single crystal by rotating and pulling the seed crystal,

~~wherein~~ wherein:

the single crystal is pulled with controlling a value of  $V/G$  ( $\text{mm}^2/\text{K} \cdot \text{min}$ )

within a determined ~~range~~; and range;

the range of a value of  $V/G$  ( $\text{mm}^2/\text{K} \cdot \text{min}$ ), including a desired defect region and/or a desired defect-free region, is determined according to  $T_{\text{max}}$  ( $^{\circ}\text{C}$ );  ~~$T_{\text{max}}$  ( $^{\circ}\text{C}$ );~~

wherein:

$V$  ( $\text{mm}/\text{min}$ ) is the single crystal pulling rate of pulling a single crystal;

$G$  ( $\text{K}/\text{mm}$ ) is a temperature gradient at a solid-liquid interface, in a range of ~~the~~ a melting point of the raw material and  $1400^{\circ}\text{C}$ ; ~~and~~

$T_{\text{max}}$  ( $^{\circ}\text{C}$ ) is the highest temperature of the raw material melt at an interface between a quartz crucible inner wall and a raw material ~~melt~~; melt; ~~and~~

the range of a value of  $V/G$  ( $\text{mm}^2/\text{K} \cdot \text{min}$ ) is selected from a group consisting of:

from  $-0.000724 [\text{mm}^2/(\text{^{\circ}\text{C}} \cdot \text{K} \cdot \text{min})] \times T_{\text{max}} (\text{^{\circ}\text{C}}) + 1.31$   
 $(\text{mm}^2/\text{K} \cdot \text{min})$  to less than  $-0.000724 [\text{mm}^2/(\text{^{\circ}\text{C}} \cdot \text{K} \cdot \text{min})] \times T_{\text{max}} (\text{^{\circ}\text{C}}) + 1.38$

$(\text{mm}^2/\text{K} \cdot \text{min})$ ;

$$\underline{-0.000724 [\text{mm}^2/(\text{°C} \cdot \text{K} \cdot \text{min})] \times T_{\text{max}} (\text{°C}) + 1.38}$$

(mm<sup>2</sup>/K • min) or more; and

$$\underline{\text{from } -0.000724 [\text{mm}^2/(\text{°C} \cdot \text{K} \cdot \text{min})] \times T_{\text{max}} (\text{°C}) + 1.31}$$

(mm<sup>2</sup>/K • min) to  $-0.000724 [\text{mm}^2/(\text{°C} \cdot \text{K} \cdot \text{min})] \times T_{\text{max}} (\text{°C}) + 1.35 (\text{mm}^2/\text{K} \cdot \text{min})$ .

11-13. (Canceled)

14. (Previously Presented) The method for producing a single crystal according to Claim 10, wherein the single crystal is pulled with the  $T_{\text{max}} (\text{°C})$  being in a range of 1560 °C or less.

15-17. (Canceled)

18. (Previously Presented) The method for producing a single crystal according to Claim 10, wherein, at least, the  $T_{\text{max}} (\text{°C})$  is changed by providing a heat insulating material between the crucible containing the raw material melt and a heater provided so as to surround the crucible, or by providing a heat insulating material below the crucible.

19-21. (Canceled)

22. (Previously Presented) The method for producing a single crystal according to Claim 14, wherein, at least, the  $T_{\text{max}} (\text{°C})$  is changed by providing a heat insulating material between the crucible containing the raw material melt and a heater provided so as to surround the crucible, or by providing a heat insulating material below the crucible.

23-25. (Canceled)

26. (Previously Presented) The method of producing a single crystal according to Claim 10, wherein a silicon single crystal is pulled as the single crystal.

27. (Previously Presented) The method of producing a single crystal according to Claim 10, wherein a single crystal with a diameter of 200mm or more is pulled as the single crystal.

28. (Canceled)